

NEUROSURGICAL CONGENITAL ANOMALIES IN BASRAH SOCIODEMOGRAPHIC REVIEW

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ABSTRACT

Background: Congenital anomalies, including those of the central nervous system, are among the important leading causes of morbidity, mortality, and fetal loss with a lot of families suffer and misery.

OBJECTIVES

To study the profile of central nervous system (CNS) anomalies treated in the neurosurgical unit in Basra teaching hospital from the socio- demography point of view.

SUBJECT AND METHOD

It is A prospective observational study for about 87 case, All cases enrolled in this study were seen and managed by the authors over 3 years, December 2014 –December 2017, we discuss the socio-demographic status of the child and his parents (age, sex, season of birth, list inside the family, residency, parents consanguinity, age and job and fathers habits).

RESULTS

(57.4%) CNS anomalies presented during the 1st month of life, female represent 57.4% of cases, a highest presentation was during summer time, 33.3% were the 1st family child and 67% comes from a rural area. consanguinity was present in 70% of cases, 70% were among fathers between 20-40 year, and among mothers, it was peaked in between below 20 y and 30 year in about 90% of cases. Worker father 74.7% and all mothers were housewives . most common fathers bad habits was smoking (39% of cases).

CONCLUSIONS

There is a variation in sex distribution in between Iraq and some near countries, consanguinity is a major correlated factor, more between young parents from rural areas. This problem needs a lot of efforts to increase the educational state of the general population, especially in the rural areas.

KEYWORDS: *Congenital, Neurosurgical, Socio Demographic & Basra*

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INTRODUCTION

CNS anomalies could be grouped into several entities including neural tube defects and associated spinal cord malformations (myelomeningocele, meningocele, encephalocele), disorders of structural specifications, disorders of the posterior fossa, brain stem, and cerebellum, disorders of brain growth and size, and disorders of skull growth and shape.[1], neural tube defects and hydrocephaly represents the most common anomalies.

Globally, the incidence of congenital anomalies has been shown to vary from one geographical region to another, affecting about 3–7% of all newborns. In most series reported, CNS anomalies appear to be the most common

systemic congenital anomalies. [2-7]

The main cause of NTDs are abnormalities that occur during neurulation, which should be complete by 4 weeks postconception [8]. An estimated 1 in 1000 infants are born with a neural tube defect (NTD) annually in the United States [9], and more are spontaneously aborted or electively terminated. The most common types of NTDs are anencephaly and spina bifida, which typically present as open NTDs; such NTDs occur when neural tissue is exposed to the environment or only covered by a membrane. Less common are encephalocele and meningocele, which typically present as closed NTDs, in which the defect is covered by normal skin. Anencephaly is fatal in all cases; infants with spina bifida frequently survive following surgery [9]. Although no single major gene has been implicated as causal in the development of NTDs [10], these defects are thought to result in part from genetic risk factors. Environmental (non-inherited) factors are also thought to play a role in NTD development; however, established risk factors, such as folate levels [11, 12], maternal diabetes [13], and use of antiepileptic medications [14, 15], account for only a small proportion of prevalent NTDs, indicating that unidentified risk factors for NTD still remain.

OBJECTIVES

Our aim is to make highlighting on the sociodemographic aspects for patients with common congenital neurosurgical anomalies that attending neurosurgical ward at Al Sadieteaching hospital in Basrah.

Patients and Method

It is a prospective descriptive study of the socio-demographic aspects for children with congenital anomalies attending the neurosurgical ward at Al-sadr teaching hospital in Iraq, Basrah during the period between December 2014 and December 2017, we use a questionnaire including the following: child age at presentation, sex, season, list in family, residency, parents consanguinity, father and mother age, job and fathers habits.

RESULTS

Socio-demographic Study table 1 shown most of CNS anomalies (57.4%) presented during the 1st month of life and all cases during the 1st year, female represent 57.4% of cases, a highest presentation was during summer time (fig. 1), 33.3% were a 1st family child and 67% comes from the rural area.

Table 1: Socio Demographic Study

	{1 month	1-6 months	7 – 12 months	> 1 year				
Age at presentation	50 (57.4%)	34 (39%)	3(3.4%)	0				
	Male	Female						
Sex	37 (42.5%)	50 (57.4%)						
	1 st	2nd	3 rd	4thh	5th	6th	7th	8th
List in family	29(33.3)	18(20.6)	9	6	7	12	4	2
	Rural	Urban						
Residency	59 (67.8%)	28 (32.1%)						

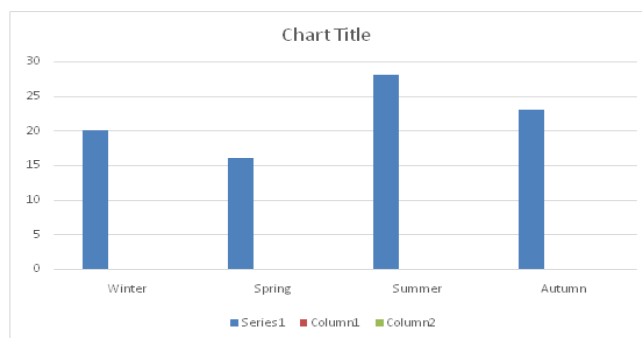


Figure 1: Seasonal Distribution

Parents Basic Information table 2 shown consanguinity was present in about 70% of cases especially 1st and 2nd degree, highest prevalence (70%) was among fathers between 20-40 year of age, and among mothers, it was peaked in between below 20 y and 30 years in about 90% of cases. The child with anomalies was mostly a son for a worker father (74.7%), all mothers were housewives. most common fathers bad habits was smoking (39% of cases).

Table 2: Parents Basic Information

	1 st	2 nd	3 rd	4 th	No
consanguinity (Degree)	37(42.5%)	17(19.5%)	3(3.4%)	5(5.7%)	25(28.7%)
Age (year)	20 <	20-30	31-40	41-50	51-60
Father	12(13.7%)	32(36.8%)	29(33.3%)	9(10.3%)	-
Mother	28(32.2%)	52(59.8%)	7(8%)		
Job	Worker	Official	House wife		
Father	65(74.72%)	22(25.28%)			
Mother	-	-	87(100%)		
	Smoker	Alcoholic	both	Non	
Father Habits	34	3	2	48	

DISCUSSIONS

In our study most of the cases presented during the 1st month of life (57.4%) and all cases during the 1st year that is because of the severity and clarity of diseases.

Female were of highest prevalence 57.4% than male 42.5%. which agree with studies did in Palestine (16), Khartoum Sudan(17) and cape town south Africa (18), but it is against study in Nigeria (19)and Saudi Arabia (20) where males were with the highest prevalence for both (Male: Female is 2:1) this is poorly understood as far as racial, environmental conditions are nested between above countries.

Summertime was to some extent of higher prevalence 32.1 %, while the temperature was of no significance in a study did in Oman (21). That mean pregnancy happened during autumn time may be of higher incidence.

The highest percentage was among 1st and 2nd family child 33.3% and 20.6 % respectively. In Omani study it was increased in later children (21), in Cap- town study it was increased at the two extremes of birth order (18).

The highest number of cases comes from a rural area in 67.8 %, mainly because of poor educational state, no antenatal care especially regarding folic acid taking in addition to increasing the incidence of relative marriage.

Consanguinity has an obvious role for increase rate for such anomalies through about 70% of cases, this was agreed with the two studies did in Saudi Arabia (89% of cases) (20)and Oman (21).

In our study young parents were the higher risk group than the older one and the incidence in decline with older parents, Omani study (21) was ends with significant relation for older maternal age than paternal one, also in Palestine(16) it was more among older mothers.

This study showed that low educational and socioeconomic status may associate with anincreased incidence of these anomalies that is through preponderance among workers fathers (74.7 % of cases), housewives mothers (100% of cases) and the highest incidence in rural areas as mentioned above.(we cannot found a similar study taking parents job in consideration to compare) , that means the antenatal care and especially preventive measures by folic acid could be neglected.

Smoker's fathers were 39% of cases. smoker 34 (39%), alcoholic 3 (3.4%), both 2 (2.3 %) and non 48 (55%)...

CONCLUSIONS

In neurosurgical congenital anomalies sex distribution, parents age, and birth order vary from country to another, Consanguinity, socioeconomic and educational state play an important role in the prevalence of such diseases.

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